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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

TRAN, PHUC H

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,208

Applicant(s)

SPALINK, GERD

Examiner

PHUC H. TRAN

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 is/are allowed.
- 6) ☒ Claim(s) 1, 8 and 11-33 is/are rejected.
- 7) ☒ Claim(s) 2-7, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sub-networks, cycle masters, clock offset, number of the busses, de-jitter filter and flow chart of method claims must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "**means**" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The Abstract is objected to because of the following informalities: "**Fig. 3**" at the end should be deleted. Appropriate correction is required.

4. The disclosure is objected to because of the following informalities: missing "Brief Summary of the Invention" See MPEP § 608.01(d).

Label a header for each section such as: Background, Summary, Drawing...etc.

Appropriate correction is required.

Claim Objections

5. Claims 14,16,20,22,24,26,27, and 29 are objected to because of the following informalities: "n" is failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Appropriate correction is required.

6. Claims 12-13,22-23,26-27,and 30 are objected to because of the following informalities: "means" in claims should be rewritten as an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. Appropriate correction is required.

*** Note: the claim limitations that employ phrases of the type "adapted to", "configured for" or "adapted for" are typical of claim limitations, which may not distinguish over the prior art. The limitations after the "adapted to", "configured for" or "adapted for" performing a function are not a (consider) positive limitation but only require the ability to so perform.**

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1,8, 11-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Seta (U.S. Patent No. 6483825 B2).

- With respect to claim 1, Seta teaches a method to perform a cycle synchronization between interconnected sub-networks, characterized in that

a reference node connected to one of the sub-networks transmits a respective cycle time information to cycle masters of all other sub-networks at recurring time instants (base station controller transmits time to base stations in Fig. 1), and

the cycle masters of all other sub-networks adjust their cycle time accordingly (the timing generator of base stations adjusts the time base the receiving information from the base station controller).

- With respect to claims 8 & 32-33, Seta also teaches characterized in that the cycle time information transmitted by the reference node is a content of its cycle time register (col. 5, lines 8-15).

- With respect to claim 11, Seta discloses characterized in that the recurring time instants are determined according to a regular time interval with a small variation (col. 3, lines 59-64).

- With respect to claim 12, Seta teaches cycle synchronizator, characterized by a clock offset estimation means to determine a timing error of an own cycle timer (col. 12, lines 29-33), and

a cycle adjustment loop receiving the timing error determined by said clock offset estimation means to adjust the own cycle timer to reduce its timing error (col. 12, lines 37-40).

- With respect to claim 13, Seta discloses characterized by a de-jitter after arranged in-between the clock offset estimation means and the cycle adjustment loop to filter said determined timing error (block 25 in Fig. 2).

- With respect to claims 14-16,21-22,25-26, & 28-29, Seta teaches a method for performing cycle synchronization in a network comprising a plurality of interconnected busses (e.g. the busses 20 and 30 in Fig. 1), one of which comprises a reference node (e.g. base station controller) and the others of which each comprises a cycle master (base station), comprising the steps of:

receiving, at one or more of said cycle masters, cycle time information from said reference node (col. 12, lines 15-18);

adjusting a cycle length at said one or more of said cycle masters (col. 12, lines 37-40), respectively, by a value selected from the group consisting of +n, 0 and -n ticks based on said

received cycle time information (e.g. the time different was measured by the base station controller and correction at the base station. See at Col. 8, measurement of transmission delay and method of notifying of time information and time correction information).

- With respect to claim 17, Seta further discloses wherein said adjusting of a cycle duration comprises adjusting the number of ticks per cycle of a cycle timer of a node local to said one bus (col. 9, lines 5-45).

- With respect to claim 18-19, Seta discloses wherein said adjusting is effected on the basis of cycle time information received from a node remote to said one bus (e.g. the base station controller transmit signals to correct the time col. 12, lines 34-36).

- With respect to claim 20, Seta teaches wherein said adjusting yields subsequent cycles whose cycle duration does not differ by more than n (see Fig. 4).

- With respect to claim 23, Seta further teaches wherein said cycle synchronizer is configured and adapted to effect said cycle duration adjustment on the basis of said received cycle time information (e.g. the base station controller receives signal from base station col. 12, lines 6-9).

- With respect to claim 24, Seta further discloses wherein said cycle synchronizer is configured and adapted to effect said cycle duration adjustment such that the cycle duration of subsequent cycles does not differ by more than n (e.g. the number of base station controller transmit to base station to determine the time different).

- With respect to claim 27, Seta discloses wherein said cycle duration adjustment means is configured and adapted to effect said adjusting of said cycle duration such that 25 the cycle duration of subsequent cycles does not differ by more than n (col. 12, lines 37-40).

- With respect to claim 30, Seta teaches comprising: a second network device local to said second bus and configured and adapted for transmitting cycle time information (e.g. the second base station); and

clock offset estimation means, local to said first bus, for establishing an estimation of cycle synchronization between said first bus and said second bus on the basis of said received cycle time information and for providing information on the basis of which said cycle duration adjustment means performs said adjusting (e.g. Fig. 4).

- With respect to claim 31, Seta teaches wherein said second network device is configured and adapted for transmitting cycle time information at regular intervals (e.g. col. 3, lines 59-64).

Allowable Subject Matter

9. A claim 34 is allowed.

10. Claims 2-7, & 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments with respect to claims 1,8,11-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sayers et al. (U.S. Patent No. 6542754 B1) discloses synchronizing clock signals in wireless networks.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHI PHAM can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran
Assistant Examiner
Art Unit 2664

P.t
4/10/06



WELLINGTON CHIN
SENIOR PATENT EXAMINER